IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

SYSCAN, INC, **No C-03-2367 VRW**

Plaintiff, **CLAIM CONSTRUCTION ORDER**

v

PORTABLE PERIPHERAL CO, LTD, et al,

Defendants.
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On October 14, 2005, the court held a claim construction hearing pursuant to Markman v Westview Instruments, Inc, 517 US 370 (1996). Based on the parties' arguments at the hearing and their submissions to the court, the court issues the following claim construction order.

There are three patents-in-suit, all relating to inventions in the field of image scanning. For ease of cross-reference to the parties' submissions, the court will discuss the patents and construe their terms in the same sequence as the patents appear in the parties' submissions. As the court writes

principally for the parties, it will not discuss the details of the inventions or define terms well-known to those skilled in the art, except as is necessary to construe the claims of the patents. Nor will the court recapitulate the parties' agreed-upon constructions contained in the joint claim construction and prehearing statement, Doc #6, to the extent the court agrees with those constructions. The court will, however, discuss constructions that were initially disputed but subsequently agreed upon by the parties.

I

US Patent No 6,275,309 (the "'309 patent"), issued on August 14, 2001, to Darwin Hu, Alpha Hou, Dongtai Lu, and Chengrong Lu, discloses "lightweight mobile scanners." The scanner's light weight is achieved by including "only the minimum components to operate as a scanner." '309 Patent, Abstract. The scanner "does not have a separate power supply," and "unlike many scanners in the market, there is not a single microcontroller in the disclosed mobile scanner * * *." Id.

US Patent No 6,459,506 (the "'506 patent"), issued on October 1, 2002, to Darwin Hu and Alpha Hou, discloses a "lightweight dual-mode mobile scanner powered from a universal serial bus [("USB")] port." The disclosed scanner is "capable of being powered through a [USB] connection" and "the individual components of the portable scanner are selectively and controllably powered so as to function within the power limitations of the [USB] port * * * without appreciable degradation of a captured image," whether that image is captured from transparent (e g, film) or opaque (e g, paper) media. '506 patent, Abstract. The '506 patent

is a continuation-in-part of the '309 patent. Id, col 1, ll 7-8. Apart from the '506 patent's utilization of USB technology, the claims of the '309 patent and '506 patent are very similar.

US Patent No 6,054,707 (the "'707 patent"), issued on April 25, 2000, to Alpha Hou, discloses "portable scanners capable of scanning both opaque and transparent materials." The disclosed scanners' dual-mode capabilities is achieved by a "dual-illumination system comprising a front illumination source and a back illumination source." '707 patent, Abstract.

II

The construction of patent claims is a question of law to be determined by the court. Markman v Westview Instruments, Inc, 517 US 370 (1996). The goal of claim construction is "to interpret what the patentee meant by a particular term or phrase in a claim." Renishaw PLC v Marposs Societa per Azioni, 158 F3d 1243, 1249 (Fed Cir 1998). In determining what a patentee meant by a term or phrase, the court looks first to the claim itself:

> The claims of the patent provide the concise formal definition of the invention. They are the numbered paragraphs which "particularly [point] out and distinctly [claim] the subject matter which the applicant regards as his invention." 35 USC § 112. It is to these wordings that one must look to determine whether there has been infringement. Courts can neither broaden nor narrow the claims to give the patentee something different than what he has set forth. No matter how great the temptations of fairness or policy making, courts do not rework claims. They only interpret them.

EI Du Pont de Nemours & Co v Phillips Petroleum Co, 849 F2d 1430, 1433 (Fed Cir 1988).

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"The claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim." Renishaw, 158 F3d at 1248. "The words used in the claim are viewed through the viewing glass of a person skilled in the art." Brookhill-Wilk 1, LLC v Intuitive Surgical, Inc, 326 F3d 1215, 1220 (Fed Cir 2003) (citing Tegal Corp v Tokyo Electron Am, Inc, 257 F3d 1331, 1342 (Fed Cir 2001)). "Absent a special and particular definition created by the patent applicant, terms in a claim are to be given their ordinary and accustomed meaning." York Prods, Inc v Central Tractor Farm & Family Ctr, 99 F3d 1568, 1572 (Fed Cir 1996). The court may, if necessary, consult a variety of sources to determine the ordinary and customary meaning of a claim term, including "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." Innova/Pure Water, Inc v Safari Water, 381 F3d 1111, 1116 (Fed Cir 2004).

The court begins its construction of claim terms by consulting intrinsic evidence of the meaning of disputed claim terms, which includes the claims, the specification and the prosecution history (if in evidence). Lacks Industries, Inc v McKechnie Vehicle Components USA, Inc, 322 F3d 1335, 1341 (Fed Cir 2003). "If upon examination of this intrinsic evidence the meaning of the claim language is sufficiently clear, resort to 'extrinsic' evidence, such as treatises and technical references, as well as expert testimony when appropriate, should not be necessary." Digital Biometrics, Inc, v Identix, Inc, 149 F3d 1335, 1344 (Fed

Cir 1998). "[I]f after consideration of the intrinsic evidence, there remains doubt as to the exact meaning of the claim terms, consideration of extrinsic evidence may be necessary to determine the proper construction." Id. Although extrinsic evidence such as expert and inventor testimony, dictionaries and learned treatises can shed useful light on the relevant art, it is less significant than the intrinsic record in determining the legally operative meaning of claim language. Phillips v AWH Corp, 415 F3d 1303, 1317 (Fed Cir 2005).

"[A] court may constrict the ordinary meaning of a claim term in * * * one of four ways[:]" (1) "if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim in either the specification or prosecution history;" (2) if the intrinsic evidence shows that the patentee distinguished the term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention; (3) "if the term chosen by the patentee so deprives the claim of clarity as to require resort to other intrinsic evidence for a definite meaning; and (4) "if the patentee phrased the claim in step- or means-plus-function format," then "a claim term will cover nothing more than the corresponding structure or step disclosed in the specification, as well as equivalents thereto * * *." CCS Fitness, Inc v Brunswick Corp, 288 F3d 1359, 1366-67 (Fed Cir 2002) (internal citations and quotation marks omitted).

Limitations from the specification, such as from the preferred embodiment, cannot be read into the claims absent an express intention to do so. Teleflex, Inc v Ficosa North Am Corp,

299 F3d 1313, 1326 (Fed Cir 2002) ("The claims must be read in view of the specification, but limitations from the specification are not to be read into the claims."). But "a construction that excludes a preferred embodiment 'is rarely, if ever, correct.'" C R Bard, Inc v US Surgical Corp, 388 F3d 858, 865 (Fed Cir 2004) (citing Vitronics, 90 F3d at 1583). Conversely, if "the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question." SciMed Life Systems, Inc v Advanced Cardiovascular Systems, Inc, 242 F3d 1337, 1341 (Fed Cir 2001).

With these legal principles in mind, the court turns to the construction of the disputed claim language of the three patents-in-suit.

III

A

The '309 Patent

1 "interface module"

The parties dispute whether the interface module can be contained within the scanner's main case.

The mobile scanner in claim 1 comprises an image sensing module, a motion mechanism and "an interface module coupling the image sensing module and the motion mechanism to a computing device and receiving a power supply and system control signals from the computing device." '309 patent, col 10, ll 39-57. The parties

agree that the quoted phrase means "an interface engine received in an external computing device coupling the motion mechanism to a computing device and receiving a power supply and system control signals from the computing device." Doc #36, Ex 1 at 2. It would thus appear the parties agree that "interface module" means "interface engine received in an external computing device." Only defendants propose this construction, but the parties implicitly agree a person skilled in the art would understand that if the interface module is received in an external computing device, it cannot reside within the scanner itself. Plaintiff, however, contends that nothing in the claims suggests the interface module must reside outside of the scanner.

The specification clearly distinguishes the disclosed scanner from the prior art on the basis of the disclosed scanner's minimalist approach. "The disclosed invention, for the first time, provides a mobile scanner that has only the minimum components to operate." '309 patent, col 2, l 27 (emphasis added). "Further, unlike many scanners in the market, there is not a single microcontroller in the disclosed scanner * * *." Id, ll 29-31. The "Summary of the Invention" section goes on to state that one feature of the "present invention" is "the scanner itself comprises only an image sensing module and a motion mechanism," which are "coupled to an interface engine that is typically received in a computing device." Id, ll 36-38, 44-45 (emphasis added).

The specification later states that "fundamentally different from the scanners in the market, there is no microcontroller and other electronic components in main module to control the operation of the image sensor and the illumination

source." Id, col 6, ll 63-67 (emphasis added). It is unclear whether this statement refers to all embodiments or a particular embodiment; the specification does not describe any embodiment where electronic components that control the scanner are within the main case. If the court were to treat this as a statement distinguishing all scanners containing any such electronic components within the main case, it would be clear that the interface module could not reside in the main module because the interface module contains control circuitry (i e, electronic components that control the scanner). This statement appears to shed light on statements contained in the "Summary of the Invention," discussed above.

Specifically, the patentee clearly limited the scope of the invention to scanners where the "scanner itself" contains "only" the minimum components needed to operate, viz, a motion mechanism and an image sensing module. By "scanner itself," the patentee meant the main module, depictions of which appear in the diagrams of the invention. The court finds that the patentee did not intend the invention to encompass scanners where the main case housed components in addition to the image sensing module and the motion mechanism. On the other hand, the court finds that the patentee did contemplate embodiments where the interface engine would not be implemented in a card that is received within an external computing device. See '309 patent, col 2, ll 43-45 ("Both of the image sensing module and the motion mechanism are coupled to an interface engine that is typically received in a computing device." (emphasis added)). This is consistent with the patentee's use of the distinct (albeit related) term "interface card,"

discussed below.

Aside from the location of the interface module, plaintiff proposes that the term be construed to account for the fact that the interface module "comprises a control circuit that receives system control signals from the computing device and generates logical control signals for the image sensing module and the motion mechanism to operate in synchronization." Accounting for these features in the construction of the term "interface module" would render limitations contained in claim 7 superfluous. Plaintiff further proposes that the construction of this term accounts for the fact that the interface module "draws a power supply from the computing device to energize the image sensing module and the motion mechanism to operate." Claim 1 already includes this limitation, suggesting the patentee did not contemplate that this feature was inherent in the term "interface module." See Phillips, 415 F3d at 1325 ("The inclusion of such a specific limitation on the term 'baffles' in claim 2 makes it likely that the patentee did not contemplate that the term 'baffles' already contained that limitation.").

The court construes "interface module" as "interface engine located outside of the main case that houses the image sensing module and motion mechanism."

2 "the image sensor array is energized by the power supply and controlled sensor control signals from the interface module"

Although initially disputed, the parties now agree that this phrase should be construed as "the image sensor array receives power supply, typically a 5-volt power, from the interface module

that is drawn from a notebook computer through a multi-wire cable. The image sensor array also receives control signals from the interface module which synchronizes the image sensor array with the motion mechanism." See Doc #40 at 11. The court adopts this construction.

3 "compact house"

This term appears in independent claim 12. Once again, the dispute focuses upon which components are contained within the scanner's main case. Plaintiff proposes that the term be construed as "a compact case that can be made of light but rigid plastic material houses [sic] both image sensing module and motion mechanism." Plaintiff's proposed construction is clearly appropriate in light of the written description. See '309 patent, col 5, ll 10-14. The question remains whether "compact house" should be further construed, as defendants propose, to specify that "no other microcontroller or electronic components that control the operation of the image sensor and the illumination source" are housed within the compact house.

Defendants' proposed construction finds some support in the language of claim 12. Claim 12 provides that the color image sensing module and the motion mechanism are housed in the compact house. Id, col 11, ll 43-45. But claim 12 is silent about the interface card's location vis-a-vis the compact house. Id, ll 51. Understandably, defendants seize upon this, stating that "in drafting the claims, when the applicant wanted to say that a particular element resides in the 'compact house,' he specifically did so in the claims." Doc #40 at 6. Even so, under defendants'

reading of claim 12, the applicant did not intend the term "compact house" to convey, of itself, whether particular elements resided within or without the compact house.

As discussed, however, in connection with "interface module," *supra*, it is clear from the specification that the patentee intended only to claim scanners where the "scanner itself" contains only the components necessary to operate (I e, an image sensing module and a motion mechanism). It is clear that the compact house is the main case for the "scanner itself," for, as defendants point out, the term "main case" and "compact case" are used interchangeably in the specification. See Doc #40 at 4 n2.

The court construes "compact house" as "compact case that can be made of light but rigid plastic material and that houses only a color image sensing module and a motion mechanism."

4 "color image sensing module"

This term first appears in claim 12. The parties dispute whether this term contemplates an image sensing module that can utilize a single source of white light in lieu of multiple colored light sources. Defendants argue that the specification only contemplates **color image sensing modules that operate by the illumination of three colored lights. Doc #40 at 10. Thus, defendants propose the following construction: "an image sensing module that is capable of sensing color images, through the illumination of multiple colored lights." Id. It appears that defendants use the word "multiple" rather than "three" in order to avoid a construction that would render superfluous the limitations set forth in claim 17. See '309 patent, col 12, ll 19-23 (claiming**

the "mobile scanner as recited in claim 16; wherein the color image sensing module comprises a first illumination source that further comprises three colored lights").

It is true that the written description only describes image sensing modules where the illumination source comprises three primary colored lights. See, e g, id, col 7, ll 34-35; col 8, ll 51-56. But nowhere does the specification disclaim embodiments that utilize a single light source; nor does the specification distinguish prior art on this basis. At the hearing, defendants attached great weight to the following passage from the specification:

> Typically, the illumination source comprises three primary colored lights, such as red, green and blue. To reproduce a color image, three primary color intensity images must be obtained. In other words, A/D converter 508 receives three analog signals respectively for each of the colored lights and produces respectively three digital signals.

Id, col 7, ll 34-37 (emphasis added).

Based on the word "must," defendants argue that the patentee understood that three primary colored lights are necessary to reproduce a color image. See CCS Fitness, 288 F3d at 1366-67 ("[A] claim term will not carry its ordinary meaning if the intrinsic evidence shows that the patentee * * * described a particular embodiment as important to the invention.").

The strength of defendants' argument is further bolstered by the following passage from the written description, which, curiously, neither party has addressed:

> Those skilled in the art understand that back illumination source 602 may be implemented with a single LED or a fluorescent light controlled by an "ON" signal at connector 603, and alternatively with three colored lights similar to red LED 604, green

LED 606 and blue LED 608 * * *."

'309 patent, col 8, ll 39-44.

Given the consistency with which the patentee stated that the front illumination source comprises three primary colored lights, the description of alternative embodiments of the back illumination source is meaningful. The patentee clearly contemplated that a fluorescent light or other single light source would suffice for the back illumination source. If the patentee believed the same to be true for the illumination source contained in the color image sensing module, he would have made that clear.

Plaintiff relies upon the following sentence: "'Typically, the three colored lights are red, green and blue light tubes stimulated by one or more red, green or blue LEDs.'" See Doc #43 at 6 (quoting '309 patent, col 9, ll 36-38). According to plaintiff, the phrase "one or more" makes clear that the patentee contemplated embodiments where the front illumination source utilized only one light source. The court is unconvinced. The natural reading of this language is that each of exactly three light tubes is stimulated by one or more LEDs. Further, the court agrees with defendants that the word "typically" is directed toward the frequency with which the three lights are tubes stimulated by LEDs and not the frequency with which there are three (as opposed to some other number of) light sources. Thus, the word typically does not imply that the patentee contemplated embodiments utilizing fewer than three light sources. The court concludes that the patentee did not contemplate that the illumination source contained in the image sensing module (as distinguished from the "second" or "back" illumination source) could be implemented except by three

colored lights.

Because the written description clearly contemplates embodiments utilizing "CCD" sensors in lieu of "CMOS" sensors, the court rejects plaintiff's proposed construction to the extent it incorporates the CMOS sensor. See '309 patent, col 8, ll 64-67.

The court construes "color image sensing module" to mean "an image sensing module comprising (1) an image sensor comprising photodetectors capable of sensing the full spectrum of color from scanning objects and (2) an optical lens that collects incident light that is either reflected by an opaque scanning object illuminated by three colored lights or transmitted by a transparent scanning object."

5 "interface card"

Once again, the parties dispute whether the interface —— this time a card, not a module —— can be located in the scanner's main case.

Reading the specification as a whole, it is clear that an interface card is a particular embodiment of the interface engine. For example, the written description provides that "[a]ccording to one embodiment, interface engine 312 is so designed and implemented in a PC Card * * *." '309 patent, col 6, ll 40-41; see also id, col 3, ll 45-46 ("Mobile scanner 100 is connected, through a communication cable 112 to an interface engine housed in a card 114."). Further, the specification suggests that the interface card is received in a computing device. See id, ll 52-53; see also id, col 2, ll 43-45 (stating in the "Summary of the Invention" that "[b]oth of the image sensing module and the motion mechanism are

coupled to an interface engine that is typically received in a computing device"). Without placing undue reliance upon extrinsic evidence, the court notes at least one dictionary definition confirming that interface cards are commonly understood as an interface device received into a computing device. See PCMag.com Encyclopedia (defining "interface card" with reference to the term "expansion board," which in turn is defined as a "printed circuit board that plugs into an expansion slot on the motherboard and extends the computer's capability to control a peripheral device") (available at www.pcmag.com/encyclopedia).

Plaintiff's proposed construction accounts for other aspects of the interface card (e g, PCMCIA compliance) already set forth in limitations of claims that depend on claim 12, thereby violating the doctrine of claim differentiation. See, e g, Comark Communications, Inc v Harris Corp, 156 F3d 1182, 1187 (Fed Cir 1998) (stating that the doctrine of claim differentiation creates "a presumption that each claim in a patent has a different scope").

The court construes "interface card" as "interface engine implemented in a card that is received in an external computing device."

B

The '506 Patent

1 "mobile scanner"

This term first appears in claim 1. Plaintiff proposes a construction that details the scanner's USB functionality. Defendants propose a construction that references the scanner's ability to scan both transparent and opaque objects.

Defendants' position is amply supported by the specification. The very first sentence of the "Summary of the Invention" states that "an object of the present invention to provide a portable dual-mode scanner device * * *." '506 patent, col 2, ll 24-25. "In construing claims, the problem the inventor was attempting to solve, as discerned from the specification * * * is a relevant consideration." CVI/Beta Ventures, Inc v Tura LP, 112 F3d 1146, 1160 (Fed Cir 1997). And, more than once, the patentee distinguished prior art based on the ability of the present invention to scan both transparent and opaque scanning objects. See '506 patent, col 2, ll 64-67; id, col 6, ll 12-16.

As to plaintiff's proposed construction, claim 1 already specifies that the mobile scanner comprises "a universal serial bus interface module coupling the image sensing module and the motion mechanism to a computing device and receiving power and system control signals therefrom." Id, col 10, ll 35-39. Accordingly, it is unlikely the patentee contemplated that the term "mobile scanner" already contained that limitation.

The same logic does not defeat defendants' proposed construction. Claim 18 recites a mobile scanner "wherein the mobile scanner can scan an opaque document without the base case being mounted and wherein the mobile scanner can scan a transparent document with the base case being mounted." Id, col 12, ll 33-36. At the hearing, however, defendants argued that the thrust of claim 18 is to disclose the scanner's ability to scan opaque documents when the base case is not mounted and transparent documents when the base case is mounted, and not the scanner's dual-mode capabilities in general. Defendants' argument was convincing.

The court construes "mobile scanner" as "a dual-mode scanner that is compact, energy efficient and lightweight enough to be used as an accessory to a laptop computer." See id, col 1, ll 44-45; col 2, ll 13-15.

2 "interface engine"

This term first appears in claim 13. As with the '309 patent, the parties' dispute focuses primarily upon whether the interface between the scanner and the computing device can reside within the scanner's main case. Defendants contend that it cannot. In the context of the '506 patent, this construction is unsupportable. The claim language makes clear that the interface engine is contained within the main case in some embodiments. See id, col 12, ll 12-14 (reciting a mobile scanner "wherein the interface engine is enclosed in the main case and communicate with the computing device through the serial bus port"). Further, and unlike the '309 patent, the "Summary of the Invention" section provides that "the scanner itself comprises an image sensing module, a motion mechanism and an interface engine." Id, col 2, ll 34-36. Defendants' proposed construction is accordingly rejected.

Aside from the location of the interface engine, the parties' proposed constructions are directed at the components of and functions performed by the interface engine. Although construction of other limitations in claim 13 would be a proper vehicle for addressing these matters, construction of the term "interface engine" is not. The court will construe other limitations in claim 13 if and when the parties assert them or it otherwise becomes necessary.

C

The '707 Patent

1 "portable scanner"

The parties dispute whether sheet-fed scanners should be included within the scope of the invention. Plaintiff's proposed construction excludes sheet-fed scanners, but plaintiff would compromise on a construction that excludes only "conventional" sheet-fed scanners. Doc #43 at 10.

The court finds it unnecessary to construe "portable scanner" in a way that contrasts the invention from sheet-fed or flatbed scanners, "conventional" or otherwise. By its own terms, claim 6 limits the invention to portable scanners comprising a motion mechanism that rolls the object to be scanned through the device. '707 patent, col 8, ll 43-44. Further, if scanners are conventional because they cannot be carried as an accessory to a laptop computer, see Doc #39 at 10, then the court's construction excludes conventional scanners without injecting the imprecise term "conventional."

The court construes "portable scanner" as "a scanner that is able to be carried by people as an accessory to a laptop computer." See '707 patent, col 1, ll 54-56.

2 "image sensing module"

This term first appears in claim 6. Although a matter of dispute in the joint claim construction statement, the parties have agreed to the following construction: "a contact image sensor comprises [sic] an image sensor, an optical lens system and a front illumination source, all integrated in a tubular casting." Doc #39

at 10; Doc #40 at 18. The court adopts this construction.

3 "front illumination source"

Although a matter of dispute in the joint claim construction statement, the parties have stipulated to the following construction: "a light source providing front illumination to the scanning object when the scanning object is opaque." Doc #39 at 11; Doc #40 at 18. Although a step in the right direction, a clearer construction is supported by the written description. The court construes "front illumination source" as "a light source providing illumination to the front face of the scanning object when the scanning object is opaque." See '707 patent, col 5, ll 5-9.

4 "back illumination module"

Once again, the parties have agreed to the following construction of an initially disputed term: "back illumination module provides illumination from the back of a transparent scanning object and is in parallel with the image sensing module in order for a scanning object to pass through between them." Doc #39 at 11; Doc #40 at 18-19. The phrase "and is in parallel with the image sensing module in order for a scanning object to pass through between them" is unnecessary because claim 6 already provides for this limitation. See '707 patent, col 8, ll 40-42 (reciting that the image sensing module and back illumination module are "integrated in parallel and forming a scanning gap therebetween").

The court construes "back illumination module" as "a module providing illumination from the back of the scanning object

when the scanning object is transparent." See id, col 5, ll 19-21.

5 "said image sensing module and back illumination module integrated in parallel and forming a scanning gap therebetween"

The parties now agree that this phrase should be construed as "the image sensing module and back illumination module are integrated in parallel and located on opposite sides to form a gap, typically, one-eighth of an inch, and thus provide an optical path for the scanning object regardless opaque [sic] or transparent." Doc #39 at 12; Doc #40 at 19. The phrase "and thus provide an optical path for the scanning object regardless opaque [sic] or transparent" is unnecessary because claim 6 already provides for this limitation. See '707 patent, col 8, ll 43-47 (reciting that "motion mechanism roll[s] said scanning object through said scanning gap regardless said scanning object is opaque or transparent").

Accordingly, the court construes this phrase as "the image sensing module and back illumination module are integrated in parallel and located on opposite sides to form a gap, typically one-eighth of an inch in width."

6 "means for detecting whether said scanning object is opaque or transparent"

This limitation is set forth in independent claims 7 and 13. The parties dispute whether this phrase should be construed as a means-plus-function limitation. "A claim limitation that actually uses the word 'means' will invoke the rebuttable

presumption that § 112 ¶ 6 applies." CCS Fitness, 288 F3d at 1369. The presumption is rebutted "where a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function." Sage Prods v Devon Industries, Inc, 126 F3d 1420, 1427-28 (Fed Cir 1997). Here, claims 7 and 13 recite a function without elaborating any structure, material or act to perform the recited function. Hence, 35 USC § 112(6) applies.

"The first step in construing a means-plus-function claim limitation is to define the particular function of the claim limitation." Golight, Inc v Wal-Mart Stores, Inc, 355 F3d 1327, 1333 (Fed Cir 2004). The function of a means-plus-function claim limitation should be construed to include "the limitations contained in the claim language, and only those limitations." Id (internal quotations omitted). The function recited in claim 13 is "detecting whether said scanning object is opaque or transparent." '707 patent, col 9, ll 27-28.

"The next step in construing a means-plus-function claim limitation is to look to the specification and identify the corresponding structure for that function." Golight, 355 F3d at 1334. The written description clearly identifies one structure that performs the claimed function: "[A] pair of light source (emitter) 330 and photodetector 332 is used to detect if scanning object is opaque or transparent. Preferably, light source 330 and photodetector 332 are aligned so that photodetector 332 is always activated by the light source." '707 patent, col 5, ll 58-62.

Plaintiff contends that the specification includes other corresponding structures that perform the claimed function.

Specifically, plaintiff points to the following language:

> It can be appreciated by those skilled in the art that there are many other ways that can instruct the control circuit to turn on the appropriate illumination source for the right scanning object. One of the ways is simply based on a manual determination. In other words, there can be installed a button accessible by a user of the scanner, the front illumination source is a default selected illumination source for all scanning objects. When the user has a transparent sheet to scan, the button can be pressed to activate the illumination source and meanwhile turn off the front illumination so that a proper illumination light source is always provided.

Id, col 6, ll 7-18.

"A structure disclosed in the specification qualifies as 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." Default Proof Credit Card System, Inc v Home Depot USA, Inc, 412 F3d 1291, 1298 (Fed Cir 2005) (citing B Braun Medical, Inc v Abbott Laboratories, 124 F3d 1419, 1424 (Fed Cir 1997)). Based on the portion of the written description cited by plaintiffs, it would appear the manual button structure does not correspond to the function of detecting whether the scanning object is opaque or transparent. Rather, based on the written description, the manual button is a structure that "instruct[s] the control circuit to turn on the appropriate illumination source for the right scanning object." Further, a manual button would seem to be incapable of detecting whether the scanning object is opaque or transparent. See Webster's Third New Int'l Dictionary 616 (1981) (defining "detect" as "to determine the presence of (a signal)"). That function would be performed by the user.

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Complicating matters, however, claim 15 recites the portable scanner in claim 13 "wherein said detecting means is a manual button." '707 patent, col 10, ll 10-11; see also Medtronic, Inc v Advanced Cardiovascular, 248 F3d 1303, 1313 (Fed Cir 2001) (suggesting it is proper to look to dependent claims for an association between the function and a particular structure). Claim 15 thus establishes, ostensibly, a link between the manual button structure and the function of detecting whether the scanning object is opaque or transparent.

The court is thus faced with a situation that appears to have gone unaddressed by the Federal Circuit: the specification (here, a claim) establishes an association between the claimed function and a structure that appears to be incapable of performing that function according to the plain meaning of the language describing the function. The Federal Circuit has suggested that the court's focus should be upon whether the specification establishes a link between structure and function and not upon whether the structure is capable of performing the function. See Medtronic, 248 F3d at 1311-12. On the other hand, the Federal Circuit has unequivocally stated that "[t]he corresponding structure to a function set forth in a means-plus-function limitation must actually perform the recited function * * *." Asyst Technologies, Inc v Empak, Inc, 268 F3d 1364, 1371 (Fed Cir 2001) (emphasis added).

The court finds it unnecessary to resolve that tension here. Reading claims 13, 14 and 15 against the written description, it is clear that the patentee, acting as his own lexicographer, ascribed a meaning to the word "detecting" slightly

different from its ordinary meaning. By "detecting," the patentee meant "instructing the control circuit." See '707 patent, col 6, l 8. According to this reading, the manual button described in the written description is a corresponding structure.

Finally, plaintiff's proposed construction must be rejected to the extent it includes unspecified structures "as understood by those skilled in the art." Doc #43 at 12. See Fonar Corp v General Electric Co, 107 F3d 1543, 1551-52 (Fed Cir 1997) (rejecting other structures that were not specifically identified in the specification).

In light of the foregoing, the court finds that the "means for detecting whether said scanning object is opaque or transparent" should be construed in accordance with 35 USC § 112(6). The claim function is to instruct the control circuit whether the scanning object is opaque or transparent. The corresponding structures disclosed in the specification is (1) the combination of light source (emitter) 330 and photodetector 332, which are aligned so that photodetector 332 is always activated by light source 330 and (2) a button accessible by a user of the scanner that can be pressed to activate the back illumination source and turn off the front illumination source.

7 "detecting means indicates that said scanning object is opaque"

This phrase appears in claim 8, which is dependent upon claim 7, where the means-plus-function limitation discussed immediately above first appears. Nobody disputes that "detecting means" refers to the means-plus-function limitation in claim 7.

Defendants proposed construction entails a new means-plus-function analysis. This extra step is unnecessary because claim 8 does not recite a function separate from that set forth in claim 7. Cf York Prods, 99 F3d at 1574. Rather, this phrase merely addresses one of two possible outcomes after the corresponding structure has performed its function.

Accordingly, the court construes this phrase by incorporating the structure corresponding to the function set forth in the means-plus-function limitation of claim 7: "light source (emitter) 330 is blocked by the opaque scanning object, thereby inactivating photodetector 332."

IV

In sum, the court has construed (or expressly declined to construe at this time) all disputed claim terms and phrases of the three patents-in-suit. With respect to language that the court has declined to construe, should future circumstances require that it be given a definitive construction, a party may move for construction of that language.

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Notwithstanding any further orders the court may make regarding claim construction, this order shall be deemed to be the "claim construction order" for scheduling purposes. Within two weeks of the filing of this claim construction order, the parties shall submit a proposed schedule for further proceedings.

SO ORDERED.

VAUGHN R WALKER

United States District Chief Judge